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Art Unit: 2654

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1-13.   (Canceled)

14.   (Currently Amended) ~~The~~ A speech recognition method ~~of claim 13~~, comprising:

defining a numeric language, the numeric language including a subset of a vocabulary, the subset of the vocabulary including words that identify digits in number strings and words that enable the interpretation and understanding of number strings;

defining first acoustical models for the numeric language at a first quality level;

defining second acoustical models for other words in the vocabulary at a second quality level; and

storing the first and second acoustical models in an acoustic model database that is accessible by a speech recognition processor, wherein

the numeric language includes digits, natural numbers, alphabets, re-starts, and city/country name classes.

15.   (Currently Amended) The method of claim [[13]] 14, wherein the acoustical models are hidden Markov models.

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16.   (Currently Amended) The method of claim [[13]] 14, further comprising

defining a set of filler models that characterizes out-of-vocabulary features.

17.   (Canceled)

18.   (Currently Amended) The method of claim [[17]] 21, wherein said

performing is implemented by a speech recognition processor.

19.   (Currently Amended) The method of claim [[17]] 21, wherein said

performing is further based on a second set of acoustical models that has been defined

for other words in the vocabulary.

20.   (Previously Presented) The method of claim 19, wherein said second set of

acoustical models is defined at a quality level different than the set of acoustical

models for the numeric language.

21.   (Currently Amended) The A speech recognition method of claim 17,

comprising:

        receiving a speech signal;

        performing a speech recognition process on the received speech signal to

produce speech recognition results, the speech recognition process being based on a

set of acoustical models that has been defined for a numeric language, wherein the

numeric language includes a subset of a vocabulary, the subset of the vocabulary

including words that identify digits in number strings and words that enable the

interpretation and understanding of number strings; and

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generating a sequence of digits using said speech recognition results, said

generating being based on a set of rules, wherein

the numeric language includes digits, natural numbers, alphabets, re-starts, and

city/country name classes.

22.   (Currently Amended) The method of claim [[17]] 21, wherein the acoustical

models are hidden Markov models.

23.   (Currently Amended) The method of claim [[17]] 21, wherein said generating

is implemented by a numeric understanding processor.

24.   (Currently Amended) The method of claim [[17]] 21, wherein the set of rules

includes one of a naturals rule and alphabets rule.

25.   (Currently Amended) The method of claim [[17]] 21, wherein the set of rules

includes a restarts rule.

26.   (Currently Amended) The method of claim [[17]] 21, wherein the set of rules

includes a city/country rule.

27.   (Currently Amended) The method of claim [[17]] 21, wherein the set of rules

includes a numeric phrases rule that realigns digits.

28-29. (Canceled)

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30.   (Currently Amended) The system of claim [[29]] 33, wherein the acoustic

model comprises:

        a first set of hidden Markov models that characterize acoustic features of

words in the numeric language; and

        a second set of hidden Markov models that characterize acoustic features of

words in the remainder of the vocabulary.

31.   (Previously Presented) The system of claim 30, further comprising:

a set of filler models that characterizes out-of-vocabulary features.

32.   (Currently Amended) The system of claim [[29]] 33, further comprising:

an utterance verification processor that identifies out-of-vocabulary utterances and

utterances that are poorly recognized.

33.   (Currently Amended) The A system of claim 29, further comprising:

        a speech recognition processor that receives unconstrained input speech and

outputs a string of words, the speech recognition processor being based on a numeric

language that represents a subset of a vocabulary, the subset including a set of words

identified as being relevant for interpreting and understanding number strings;

        a numeric understanding processor containing classes of rules for converting

the string of words into a sequence of digits;

        an acoustic model database utilized by the speech recognition processor;

        a validation database that stores a set of valid numbers; and

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a string validation processor that outputs validity information based on a

comparison of a sequence of digits output by the numeric understanding processor

with valid numbers in the validation database.

34.   (Previously Presented) The system of claim 33, further comprising:

a dialogue manager processor that initiates an action based on the validity

information.

35.   (Currently Amended) The system of claim [[29]] 33, further comprising:

a language model database that stores data describing the structure and sequence of

words and phrases.

36.   (Currently Amended) The system of claim [[29]] 33, wherein said numeric

language includes digits, natural numbers, alphabets, re-starts, and city/country name

phrase classes.

37.   (New) A system, comprising:

means for receiving unconstrained input speech and for outputting a string of

words, the means for receiving unconstrained input speech and for outputting a string

of words being based on a numeric language that represents a subset of a vocabulary,

the subset including a set of words identified as being relevant for interpreting and

understanding number strings;

means for converting the string of words into a sequence of digits, the means

for converting the string of words into a sequence of digits including classes of rules

for converting the string of words into a sequence of digits;

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a validation database that stores a set of valid numbers; and

means for outputting validity information based on a comparison of a

sequence of digits, output by the means for converting the string of words into a

sequence of digits, with valid numbers in the validation database.

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